# EXHIBIT B

PTO/SB/05 (05-05)

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## UTILITY PATENT APPLICATION **TRANSMITTAL**

(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))

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	Attorney Docket No.		543312000401
	First Inventor		Ravinder S. DHALLAN
	Title	METHODS I	FOR DETECTION OF GENETIC S
	C	- Mail I shal Ma	EV 664292207 LIC

APPLICATION ELEMENTS  See MPEP chapter 600 concerning utility patient application contents.  ADDRESS TO: P.O. Box 1450 Alexandria, VA 22313-1450  ACCOMPANYING APPLICATION PARTS  9. Assignment Papers (cover sheet & document(s))  10. 37 CFR 3.73(b) Statement  9. Assignment Papers (cover sheet & document(s))  11. English Translation Document (if applicable, and assignment of the papers (cover sheet & document(s))  12. Information Disclosure Statement (PTO/SD/08 or PTO-1449)  13. Preliminary Amendment  14. X Return Receipt Postcard (NPEP 903)  15. Computer Papers (paperdix)  16. Nophalication Request under 35 U.S.C.122 (b)(2)(B)(I)  17. Other:  18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the tilt, or in an Application Data Sheet under 37 CFR 1.78:  18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisit	Expres	S Wall Label No.   EV 004302207 03				
Submit an original and a duplicate for the processing) (R pages)	=	ADDRESS TO: P.O. Box 1450				
2. X Applicant claims small entity status. See 37 CFR 1.27. S. X Specification Both the dains and abstract must start on a new page (For information on the professor damagnement, see NPEP 608.01(a)) 4. X Drawing(s) (35 U.S.C. 113)		ACCOMPANYING APPLICATION PARTS				
Both the datine and abstract must stant on a new page:    Ger information on the preferred arrangement, see MFEP 688 01(a)    X   Drawing(s) (35 U.S.C. 113)   (Total Sheets 33   1   10.   37 CFR 3.73(b) Statement   10.   37 CFR 3.7	Applicant claims small entity status.	9. Assignment Papers (cover sheet & document(s))				
(For information on the prehend arrangement, see MPEP 698.01(a)) 4. X Drawing(s) (35 U.S.C. 113) [Total Sheets 33] 5. Oath or Declaration [Total Sheets 1] a. Newly executed (original or copy) b. A copy from a prior application (37 CFR 1.53(d)) (for continustion-thinknesh and an assignee) [Total Sheets 1] b. DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.59(d) and 1.33(b).  12. Information Disclosure Statement (PTO/SB/08 or PTO-1449)  13. Preliminary Amendment  14. X Return Receipt Postcard (MPEP 503) (Should be specifically itemized)  15. Computer Readable Form (CRF) 1. COMPUTER Readable Form (		Name of Assignee:				
S. Oath or Declaration [Total Sheets 1]  a. Newly executed (original or copy)  b. A copy from a prior application (37 CFR 1.53(d))    (for confusion/divisional with Box 18 completed)  i. DELETION OF INVENTOR(S)    (Should be specifically iteminary Program (Appendix)    (Declaration Data Sheet. See 37 CFR 1.76 (2 pages))  7. CORM or CD-R in duplicate, large table or Computer Program (Appendix)    (Should be and/or Amino Acid Sequence Submission (if applicable, items a - c. are required)    a. Computer Readable Form (CRF)    ii. Computer Readable Form (CRF)    iii. Transfer Request (37 CFR 1.821(e))    b. Specification Sequence Listing on:    i. CD-ROM or CD-R (2 copies); or ii. Paper    c. Statements verifying identity of above copies  18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:  X Continuation Divisional Continuation-in-part (CIP) of prior application No: PCT/US2004/006337  Prior application information: Examiner Not Yet Assigned An Unit: Not Yet Assigned  19. CORRESPONDENCE ADDRESS  X The address associated with Customer Number: 25226  OR Correspondence address below  Name  Address  Signature  Date August 26, 2005						
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Dublications, & other information   Dublication, & Other   Dublications, & other information   Dublications, & other information   Dublications, & other information   Dublications, & other information   Dublication, & Other   Dublication, & Ot						
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Prior application information: Examiner Not Yet Assigned  19. CORRESPONDENCE ADDRESS  X The address associated with Customer Number:  25226  OR  Correspondence address below  Name  Address  City  State  Telephone  Email Address  Signature  Name  Alicia I Hager  Registration No. 44 140						
The address associated with Customer Number:    State   Zip Code	X Continuation Divisional Continuation-in-part (	of prior application No.: PCT/US2004/006337				
X The address associated with Customer Number:  25226  OR  Correspondence address below  Name  Address  City  State  Telephone  Email Address  Signature  Name  Aligia I Hagger  Registration No. 44 140	Prior application information: Examiner Not Yet As:	signed Art Unit: Not Yet Assigned				
Name  Address  City  Country  Telephone  Email Address  Signature  Name  Alicia I Hager  Registration No. 44 140	19. CORRESPONDENCE ADDRESS					
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City State . Zip Code Country Telephone Email Address Date August 26, 2005  Name Alicia I Hager Registration No. 44 140	Name					
Country  Telephone  Email Address  Signature  Date  August 26, 2005  Registration No. 44 140	Address					
Signature Date August 26, 2005  Name Alicia I Hager Registration No. 44 140	City State	. Zip Code				
Name Alicia I Hager Registration No. 44 140	Country Telephane	Email Address				
	Signature					
	I Alicia I Maner /					

I hereby certify that this correspondence in an envelope addressed to: Commission	is being deposited with	the U.S. Postal Se	ervice as Express M	ail, Airbill No. EV 664382207 US,
	oner for Patents, P.O. I	30x 1450, Alexandri	ia, VA 22313-1450	, on the date shown below.
Dated: August 26, 2005	Signature:	Leorgina	heats (Ge	eorgina Matos)

PTO/SB/17 (12-04v2)

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Under the Paperwork Reduction Act of 1995, no person are required to respond to a collection of information unless it displays a valid OMB control number. Complete if Known Effective on 12/08/2004. Not Yet Assigned Fees pursuant to the Consolidated Appropriations Act. 2005 (H.R. 4818). **Application Number** Concurrently Herewith FEE TRANSMITTAL Filing Date Ravinder S. DHALLAN First Named Inventor For FY 2005 **Examiner Name** Not Yet Assigned Applicant claims small entity status. See 37 CFR 1.27 Not Yet Assigned Art Unit 543312000401 TOTAL AMOUNT OF PAYMENT 1,700.00 Attorney Docket No. METHOD OF PAYMENT (check all that apply) Check Credit Card Money Order Other (please identify): None Morrison & Foerster LLP x Deposit Account Deposit Account Number: 03-1952 Deposit Account Name: For the above-identified deposit account, the Director is hereby authorized to: (check all that apply) Charge fee(s) indicated below, except for the filing fee Charge fee(s) indicated below Charge any additional fee(s) or underpayment of x Credit any overpayments fee(s) under 37 CFR 1.16 and 1.17 **FEE CALCULATION** 1. BASIC FILING, SEARCH, AND EXAMINATION FEES FILING FEES SEARCH FEES **EXAMINATION FEES** Small Entity Small Entity **Small Entity Application Type** Fee (\$) Fee (\$) Fee (\$) Fees Paid (\$) Fee (\$) Fee (\$) Fee (\$) 200 Utility 300 150 500 250 100 500.00 200 100 100 50 130 65 0.00 Design Plant 200 100 300 150 160 80 0.00 500 250 300 600 300 0.00 Reissue 150 Provisional 200 100 0 0 0 0.00 2. EXCESS CLAIM FEES **Small Entity** Fee (\$) Fee (\$) Fee Description Each claim over 20 (including Reissues) 50 25 Each independent claim over 3 (including Reissues) 200 100 Multiple dependent claims 180 360 **Multiple Dependent Claims** Extra Claims Fee Paid (\$) **Total Claims** Fee (\$) 325.00 Fee Paid (\$) 13 x 25.00 Fee (\$) 180.00 0.00 Indep. Claims Extra Claims Fee Paid (\$) Fee (\$) × 100.00 0.00 0 3. APPLICATION SIZE FEE If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). Fee Paid (\$) Number of each additional 50 or fraction thereof **Total Sheets** Extra Sheets Fee (\$) 125.00 875.00 437 337 - 100 = (round up to a whole number) x 4. OTHER FEE(S) Fees Paid (\$) Non-English Specification, \$130 fee (no small entity discount) Other (e.g., late filing surcharge): 0.00 SUBMITTED BY Registration No. 44,140 (650) 813-4296 Sionature Telephone Alicia J. Hager Date Name (Print/Type) August 26, 2005

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## UTILITY PATENT APPLICATION **TRANSMITTAL**

(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))

			PTO/SB/05 (05-05)	
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	Attorney Docket No.		543312000401	
	First Inventor		Ravinder S. DHALLAN	
	Title	METHODS F DISORDERS	FOR DETECTION OF GENETIC S	
	Express Mail Label No.		EV 664382207 US	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application cor	Commissioner for Patents  ADDRESS TO: P.O. Box 1450  Alexandria, VA 22313-1450				
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DELETION OF INVENTOR(S)	Copies of foreign patent documents,				
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Name					
Address					
City Sta	ate Zip Code				
Country Telepo	egne Email Address				
Signature	Date August 26, 2005				
Name (Print/Type) Alicia J. Hager	Registration No. (Attomey/Agent) 44,140				

I hereby certify that this correspondence is in an envelope addressed to: Commissio	being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 664382 ter for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown belo Signature: (Georgina Matos)	2207 US, w.
Dated: August 26, 2005	Signature: (Georgina Matos)	

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# METHODS FOR DETECTION OF GENETIC DISORDERS

## CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of International Application No. PCT/US2004/006337, filed March 1, 2004, which is a continuation-in-part of International Application No. PCT/US03/06198, filed February 28, 2003, the contents of each of which are hereby incorporated by reference herein in their entirety. The contents of each of the following applications are also hereby incorporated by reference in their entirety herein: U.S. Provisional Application Serial No. 60/378,354, filed May 8, 2002; U.S. Patent Application Serial No. 10/093,618, filed March 11, 2002; and U.S. Provisional Application Serial No. 60/360,232, filed March 1, 2002.

#### BACKGROUND OF THE INVENTION

#### FIELD OF THE INVENTION

[0002] The present invention is directed to a method for the detection of genetic disorders including chromosomal abnormalities and mutations. The present invention provides a rapid, non-invasive method for determining the sequence of DNA from a fetus. The method is especially useful for detection of chromosomal abnormalities in a fetus including translocations, transversions, monosomies, trisomies, and other aneuplodies, deletions, additions, amplifications, translocations and rearrangements.

## **BACKGROUND ART**

[0003] Chromosomal abnormalities are responsible for a significant portion of genetic defects in liveborn humans. The nucleus of a human cell contains forty-six (46) chromosomes, which contain the genetic instructions, and determine the operations of the cell. Half of the forty-six chromosomes originate from each parent. Except for the sex chromosomes, which are quite different from each other in normal males, the chromosomes from the mother and the chromosomes from the father make a matched set. The pairs were combined when the egg was fertilized by the sperm. Occasionally, an error occurs in either the formation or combination of chromosomes, and the fertilized egg is formed with too many or too few chromosomes, or with chromosomes that are mixed in some way. Because each chromosome contains many genes, chromosomal abnormalities are likely to cause serious birth defects, affecting many body systems and often including developmental disability (e.g., mental retardation).

[0004] Cells mistakenly can rejoin broken ends of chromosomes, both spontaneously and after exposure to chemical compounds, carcinogens, and irradiation. When rejoining occurs within a chromosome,